

IN THE CLAIMS:

Please cancel claims 1-3. **Please also amend** claims 4-12 as shown in the complete list of claims that is presented below.

Claims 1-3 (canceled).

Claim 4 (currently amended): ~~[[The]]~~ A narrow angle V-engine as defined in Claim 1,
comprising:

a plurality of pistons (3);

a plurality of cylinders (2) arranged alternately in two adjacent banks, the
pistons (3) being installed in the cylinders (2), the cylinders (2) having combustion
chambers;

a plurality of intake manifolds (50);

a plurality of exhaust manifolds (70);

intake ports (20) connecting the combustion chambers to the intake manifolds
(50);

exhaust ports (30) connecting the combustion chambers to the exhaust manifolds
(70);

a crankshaft (6); and

con-rods (4) which connect the pistons (2) and the crankshaft (6),

wherein the intake ports (20) of the two banks are all configured so as to pass
through one of the banks, the exhaust ports (30) of the two banks are all configured so
as to pass through the other bank, and an angle formed by the two banks is set to eight
degrees or less, and

wherein characterized in that a crown face of the pistons (3) ~~[[is]]~~ have crown
faces that are parallel with an upper face of a cylinder block (1), the upper face of the
cylinder block (1) being substantially flat over the two adjacent banks.

Claim 5 (currently amended): ~~[[The]]~~ A narrow angle V-engine as defined in Claim 1,
comprising:

a plurality of pistons (3);
a plurality of cylinders (2) arranged alternately in two adjacent banks, the
pistons (3) being installed in the cylinders (2), the cylinders (2) having combustion
chambers;
a plurality of intake manifolds (50);
a plurality of exhaust manifolds (70);
intake ports (20) connecting the combustion chambers to the intake manifolds
(50);
exhaust ports (30) connecting the combustion chambers to the exhaust manifolds
(70);
a crankshaft (6); and
con-rods (4) which connect the pistons (2) and the crankshaft (6),
wherein the intake ports (20) of the two banks are all configured so as to pass
through one of the banks, the exhaust ports (30) of the two banks are all configured so
as to pass through the other bank, and an angle formed by the two banks is set to eight
degrees or less, and
wherein characterized in that the pistons (3) and the con-rods (4) are connected by
[[a]] piston pins (5), and the each piston pin (5) [[is]] being offset further toward the
center of the engine than a centerline of the respective piston (3) and the cylinder (2).

Claim 6 (currently amended): [[The]] A narrow angle V-engine as defined in Claim 1,
comprising:

a plurality of pistons (3);
a plurality of cylinders (2) arranged alternately in two adjacent banks, the
pistons (3) being installed in the cylinders (2), the cylinders (2) having combustion
chambers;
a plurality of intake manifolds (50);
a plurality of exhaust manifolds (70);
intake ports (20) connecting the combustion chambers to the intake manifolds
(50);
exhaust ports (30) connecting the combustion chambers to the exhaust manifolds

(70);

a crankshaft (6); and

con-rods (4) which connect the pistons (2) and the crankshaft (6),

wherein the intake ports (20) of the two banks are all configured so as to pass through one of the banks, the exhaust ports (30) of the two banks are all configured so as to pass through the other bank, and an angle formed by the two banks is set to eight degrees or less, and

wherein ~~characterized in that~~ each piston (3) has a skirt portion of the piston (3) toward the outside of the engine that is longer than a skirt portion thereof toward the center of the engine.

Claim 7 (currently amended): ~~[[The]]~~ A narrow angle V-engine ~~as defined in Claim 1,~~
~~comprising~~ comprising:

a plurality of pistons (3);

a plurality of cylinders (2) arranged alternately in two adjacent banks, the pistons (3) being installed in the cylinders (2), the cylinders (2) having combustion chambers;

a plurality of intake manifolds (50);

a plurality of exhaust manifolds (70);

intake ports (20) connecting the combustion chambers to the intake manifolds

(50);

exhaust ports (30) connecting the combustion chambers to the exhaust manifolds

(70);

a crankshaft (6); and

con-rods (4) which connect the pistons (2) and the crankshaft (6); and

a collector (60) which communicates with the intake manifolds (50), and into which the opposite ends of the intake manifolds (50) that are opposite to the combustion chambers opens open, the collector being disposed closer to one of the banks than the other

wherein the intake ports (20) of the two banks are all configured so as to pass through one of the banks, the exhaust ports (30) of the two banks are all configured so

as to pass through the other bank, and an angle formed by the two banks is set to eight degrees or less, and

wherein ~~characterized in that~~ the intake manifolds (50) which ~~[[is]]~~ are connected to the ~~shorter~~ intake port (20) of the ~~intake ports (20) of~~ cylinders in the ~~[[two]]~~ closer banks ~~bank~~ extends extend to the interior of the collector (60) and ~~is caused to open into~~ the interior of the collector (60), whereby the lengths ~~from the combustion chamber to the opening~~ of the intake manifolds (50) ~~[[is]]~~ are equalized for all of the combustion chambers.

Claim 8 (currently amended): ~~[[The]]~~ A narrow angle V-engine ~~as defined in Claim 1,~~ comprising:

a plurality of pistons (3);

a plurality of cylinders (2) arranged alternately in two adjacent banks, the pistons (3) being installed in the cylinders (2), the cylinders (2) having combustion chambers;

a plurality of intake manifolds (50);

a plurality of exhaust manifolds (70);

intake ports (20) connecting the combustion chambers to the intake manifolds (50);

exhaust ports (30) connecting the combustion chambers to the exhaust manifolds (70);

a crankshaft (6); and

con-rods (4) which connect the pistons (2) and the crankshaft (6);

a collector (60) which communicates with the intake manifolds (50), the collector being disposed closer to one of the banks than the other; and

valves to open and close the intake ports;

wherein the intake ports (20) of the two banks are all configured so as to pass through one of the banks, the exhaust ports (30) of the two banks are all configured so as to pass through the other bank, and an angle formed by the two banks is set to eight degrees or less, and

~~characterized in that~~ wherein a timing for closing the intake valves of the ~~longer~~ intake ports (20) of the ~~intake ports (20) of the two banks~~ cylinders in the bank farthest from the collector (60) is delayed beyond a timing for closing the intake valves of the ~~shorter intake port (20)~~ cylinders in the bank closest to the collector (60), whereby the intake efficiency of the two banks is equalized.

Claim 9 (currently amended): ~~[[The]]~~ A narrow angle V-engine as defined in Claim 1,
comprising:

a plurality of pistons (3);

a plurality of cylinders (2) arranged alternately in two adjacent banks, the pistons (3) being installed in the cylinders (2), the cylinders (2) having combustion chambers;

a plurality of intake manifolds (50);

a plurality of exhaust manifolds (70);

intake ports (20) connecting the combustion chambers to the intake manifolds (50);

exhaust ports (30) connecting the combustion chambers to the exhaust manifolds (70);

a crankshaft (6); and

con-rods (4) which connect the pistons (2) and the crankshaft (6);

a collector (60) which communicates with the intake manifolds (50), the collector being disposed closer to one of the banks than the other; and

~~comprising~~ injectors (80R, 80L) for injecting fuel into the air in the two banks respectively,

wherein the intake ports (20) of the two banks are all configured so as to pass through one of the banks, the exhaust ports (30) of the two banks are all configured so as to pass through the other bank, and an angle formed by the two banks is set to eight degrees or less, and

~~characterized in that~~ wherein the attachment positions of the injectors (80R, 80L) are varied between the two banks to equalize the distance from the combustion chambers to ~~[[a]]~~ fuel injection positions for all of the combustion chambers.

Claim 10 (currently amended): ~~[[The]]~~ A narrow angle V-engine as defined in Claim 1,
comprising:

a plurality of pistons (3);

a plurality of cylinders (2) arranged alternately in two adjacent banks, the
pistons (3) being installed in the cylinders (2), the cylinders (2) having combustion
chambers;

a plurality of intake manifolds (50);

a plurality of exhaust manifolds (70);

intake ports (20) connecting the combustion chambers to the intake manifolds
(50);

exhaust ports (30) connecting the combustion chambers to the exhaust manifolds
(70);

a crankshaft (6); and

con-rods (4) which connect the pistons (2) and the crankshaft (6);

a collector (60) which communicates with the intake manifolds (50), the
collector being disposed closer to one of the banks than the other;

wherein the intake ports (20) of the two banks are all configured so as to pass
through one of the banks, the exhaust ports (30) of the two banks are all configured so
as to pass through the other bank, and an angle formed by the two banks is set to eight
degrees or less, and

~~characterized in that~~ wherein the lengths of ~~[[a]]~~ branch portions of the exhaust
manifolds (70) which ~~[[is]]~~ are connected to the ~~shorter~~ exhaust ports (30) of the ~~exhaust~~
~~ports (30) of the two banks is~~ cylinders in the bank farthest from the collector (60) are
increased beyond the lengths of ~~[[a]]~~ branch portions of the exhaust manifolds (70) which
~~[[is]]~~ are connected to the ~~longer~~ exhaust ports (30) of the cylinders in the bank closest to
the collector (60), whereby the distance from the combustion chambers to a confluence
portion of the exhaust manifold (70) is equalized for all of the combustion chambers.

Claim 11 (currently amended): ~~[[The]]~~ A narrow angle V-engine as defined in Claim 1,
comprising:

a plurality of pistons (3);
a plurality of cylinders (2) arranged alternately in two adjacent banks, the
pistons (3) being installed in the cylinders (2), the cylinders (2) having combustion
chambers;
a plurality of intake manifolds (50);
a plurality of exhaust manifolds (70);
intake ports (20) connecting the combustion chambers to the intake manifolds
(50);
exhaust ports (30) connecting the combustion chambers to the exhaust manifolds
(70);
a crankshaft (6); and
con-rods (4) which connect the pistons (2) and the crankshaft (6);
valves for opening and closing the intake ports and the exhaust ports; and
a camshaft (41);
wherein the intake ports (20) of the two banks are all configured so as to pass
through one of the banks, the exhaust ports (30) of the two banks are all configured so
as to pass through the other bank, and an angle formed by the two banks is set to eight
degrees or less, and
~~characterized in that~~ wherein the valves for opening and closing the ports near the
center of the engine in one of the banks and the valves for opening and closing the ports
near the center of the engine in the other bank are driven by ~~a single~~ the camshaft (41).

Claim 12 (currently amended): ~~[[The]] narrow angle V-engine as defined in Claim 1,~~
comprising:

a plurality of pistons (3);
a plurality of cylinders (2) arranged alternately in two adjacent banks, the
pistons (3) being installed in the cylinders (2), the cylinders (2) having combustion
chambers;
a plurality of intake manifolds (50);
a plurality of exhaust manifolds (70);
intake ports (20) connecting the combustion chambers to the intake manifolds

(50);

exhaust ports (30) connecting the combustion chambers to the exhaust manifolds

(70);

a crankshaft (6);

crank pins; and

con-rods (4) which connect the pistons (2) and the crankshaft (6) by way of the crank pins,

wherein the intake ports (20) of the two banks are all configured so as to pass through one of the banks, the exhaust ports (30) of the two banks are all configured so as to pass through the other bank, and an angle formed by the two banks is set to eight degrees or less, and

~~characterized in that~~ wherein the crankshaft (6) is set on a single plane at which all of the crank pins are coplanar.